



## PATENT ABSTRACTS OF JAPAN

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**(54) CATALYST FOR CLEANING EXHAUST GAS****(57) Abstract:**

**PROBLEM TO BE SOLVED:** To significantly enhance the NO<sub>x</sub> cleaning performance by providing a catalyst for oxidizing NO into NO<sub>2</sub> and a catalyst for reducing NO<sub>2</sub> into N<sub>2</sub> and in addition, a catalyst for reducing NO into N<sub>2</sub> and further, bringing the catalyst for reducing NO into N<sub>2</sub> into contact with an exhaust gas ahead of the other catalysts.

**SOLUTION:** In the catalyst for cleaning an exhaust gas to be discharged from an engine operated at a lean air fuel ratio, a first catalyst 1 for reducing NO contained in the exhaust gas into N<sub>2</sub> in the presence of HC, a second catalyst 2 for oxidizing NO into NO<sub>2</sub> and a third catalyst 3 for reducing NO<sub>2</sub> produced by oxidation using the second catalyst 2, into N<sub>2</sub> in the presence of HC, are arranged sequentially from an upstream side to a downstream side in the exhaust gas flow direction A. In this case, the NO → N<sub>2</sub> reduction reaction by the first catalyst 1 can be promoted while HC required for the reduction reaction by the third catalyst 3

is secured by adopting a catalyst consisting of zeolite and Pt borne by the former through ion exchange especially as the first catalyst 1.

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